

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 1-21 are pending in this application. Claims 1-21 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. patent 6,160,576 to Higuchi et al. (herein "Higuchi") in view of U.S. patent 6,330,038 to Johnson.

Addressing the above-noted rejection of claims 1-21 over Higuchi in view of Johnson, that rejection is traversed by the present response.

Before addressing the above-noted rejection in detail, it is believed that a brief review of the present invention would be helpful.

The applicant of the present invention recognized that image processing apparatuses include several types of adjustments to image quality, such as adjusting a sharpness, as a non-limiting example. The applicant of the present invention also recognized that when sharpness is adjusted other image qualities, such as contrast and brightness of an image, are also affected.

Accordingly, the applicant of the present invention devised the claimed invention to reduce the influence that an image quality adjustment makes upon a contrast or brightness of an image. To achieve the above operation, the claimed image display device of independent claim 1 allows a user to ***directly*** set an image quality adjustment that is not a contrast or brightness adjustment of an image. In one non-limiting example, and as recited in dependent claim 2, that image quality adjustment may be a sharpness adjustment. As noted above, the applicant of the present invention recognized that an image quality adjustment that excludes contrast and brightness adjustment may adversely affect the contrast or brightness. To address that drawback, independent claim 1 further requires an image processing section "to perform contrast compensation ***to maintain a brightness*** at a center of a specific color region larger than a predetermined size within the image displayed by the display device, regardless

of the setting of the image quality adjustment” (emphasis added). That is, according to such a feature as recited in independent claim 1, a brightness in a specific region is *maintained* even when the image quality adjustment is made. In the specific non-limiting example noted above, when a sharpness adjustment is made, a brightness is maintained at a center of a specific color region that exceeds a predetermined size. Such subject matter is also shown for example in Figures 5(a)-5(d) in the present specification. It is also noted that the other independent claims 6, 9, 12, 14, and 19 recite similar features as noted above with respect to independent claim 1.

The outstanding Office Action has maintained the rejection of Higuchi in view of Johnson even considering applicant’s previously submitted comments to the allowability of the claims over that rejection. However, applicant reiterates that the combination of teachings of Higuchi in view of Johnson is not believed to meet the claim limitations. In the following comments applicant reiterates certain previously presented comments to the allowability of the claims over the applied art, and also address the new statements set forth in the outstanding Office Action to maintain the outstanding rejections.

One basis for the outstanding rejection noted in the Office Action is that the rejection now appears to indicate that the age dial 14 in Higuchi corresponds to the claimed “setting section configured to allow a user to directly set image quality adjustment excluding contrast and brightness adjustments of the image”.¹

In response, applicant believes that position for the outstanding rejection is not properly considering the claimed features. More particularly, an age dial in Higuchi does not involve *directly setting an image quality adjustment*. As noted in the Office Action the setting of the age dial can control certain color compensator parameters in Higuchi. However, that is at most an *indirect* control from the setting of the age dial 14. There is no

¹ Office Action of February 24, 2004, the paragraph bridging pages 5 and 6.

requirement in Higuchi that based on all set ages a color compensation is made. At most setting the age dial 14 will *indirectly* change different image quality adjustments in Higuchi. In contrast to that teaching in Higuchi, in the claims as currently written the setting section allows a user to *directly set image quality adjustment*. A direct setting of image quality adjustment is not the same as an indirect control of a color compensating parameter based on a direct setting of an age dial in Higuchi. Thus, the outstanding Office Action is improper in that regard.

The outstanding rejection also recognizes that Higuchi does not disclose that the setting section (Fig. 1, item 14) is configured to allow a user to directly set image quality adjustment excluding contrast and brightness adjustments of the image.²

To overcome the recognized deficiencies in Higuchi, the outstanding Office Action now cites the teachings in Johnson. The outstanding Office Action specifically states:

Johnson discloses a video sharpness control device for a display. Johnson discloses in Fig. 7A and in col. 9, lines 29-43, where the sharpness may be set by the user separately from the brightness and contrast, so that the brightness can be maintained. It would have been obvious to one of ordinary skill in the art to combine the systems of Higuchi et al with that of Johnson as they both disclose displays with setting controls. The system of Johnson is advantageous as it enhances the video image by allowing the user to set controls separately.³

The above-noted grounds for rejection is traversed in the following aspects. First, Johnson in fact does not disclose the claimed features as relied upon in the Office Action. Further, even combining the teachings in Johnson with those of Higuchi would not meet the claim limitations. Also, no motivation exists to combine the teachings in Johnson and Higuchi.

² Office Action of February 24, 2004, page 3, lines 6-8.

³ Office Action of February 24, 2004, page 3, lines 9-14.

The above-noted basis for the outstanding rejection cites Johnson at col. 9, lines 29-

43. At that portion Johnson states:

FIG. 7A illustrates an exemplary video image 10 that is composed primarily of the broadcast television signal (black and white bars 12 and 14 in this example) and a graphical user applet 200. Using a remote control or the control panel 46, a viewer may cause the applet 200 to appear on the video image 10 so that the viewer can adjust various characteristics of the video image 10. For instance, the applet 200 may include user adjustable "slide controls," such as a brightness control 200, a contrast control 204, a tint control 206, and a sharpness control 208. As illustrated in the enlarged view of FIG. 7B, the sharpness control 208 may include a "slide" 210 that may be placed at any one of eight different settings 212a, 212b, 212c, 212d, 212e, 212f, 212g, and 212h.

The above-noted passage in Johnson simply does not teach or suggest the claimed features. The above-noted portion in Johnson merely discloses conventional controls such as a brightness control, a contrast control, a tint control, and a sharpness control.

As noted above, in one feature in the claimed invention when an image adjustment besides brightness or contrast is made a brightness can be maintained at a center of a specific color region that exceeds a predetermined size. That is, in the claimed invention, an image adjustment excluding contrast and brightness can result in the change of a brightness control. Such a feature clearly is neither taught nor suggested, nor even eluded to, in Johnson. Johnson discloses a tint control 206 and a sharpness control 208. However, Johnson does not disclose or suggest that utilizing the tint control 206 or the sharpness control 208 would have any impact on maintaining a brightness.

In response to arguments as presented above the outstanding Office Action presents the following position:

Prior art, Johnson discloses a video sharpness control device for a display. Johnson disclosed in Fig. 7A and col. 9, lines 29-43, where the sharpness may be set by the user

separately from the brightness and contrast, *so that the brightness can be maintained.*⁴

The above-noted statement set forth in the outstanding Office Action is incorrect and is also ignoring the positively recited claim limitations. First, at column 9, lines 29-43 Johnson simply does not teach or suggest that sharpness is set “so that the brightness can be maintained”. That statement in the Office Action is not based on the teachings in Johnson. At column 9, lines 29-43 Johnson discloses a separate brightness control 202, contrast control 204, tint control 206, and sharpness control 208. However, that noted portion of Johnson does not teach or suggest that the sharpness is set to maintain a brightness. It is unclear on what basis the outstanding Office Action is even making that statement as it is simply not in the disclosure in Johnson at column 9, lines 29-43. Applicant respectfully requests that if any rejection is maintained based on Johnson it be clearly set forth where in column 9, lines 29-43 Johnson discloses that sharpness is set to maintain a brightness. Applicants believe that is simply not the case. Moreover, if that was the case then there would be no need for Johnson to include a separate brightness control 202. That is, if the sharpness is set in Johnson to control brightness there would clearly be no need for the separate brightness control 202 disclosed at column 9, lines 29-43 in Johnson.

In maintaining the outstanding rejection the outstanding Office Action also states on page 6, lines 3-4, “[w]ith respect to maintaining brightness, Higuchi discloses in col. 5, lines 8-54, col. 5, line 63 – col. 6, line 6, color compensation to keep brightness”.

Applicants respectfully submit that Higuchi does not provide such teachings at the noted passages. More specifically, Higuchi changes display signals to compensate deterioration of visual sensitivity according to aging, and the original brightness is accordingly changed, as disclosed in Higuchi at col. 6, lines 19-23 and col. 7, lines 8-12.

⁴ Office Action of February 24, 2004, page 6, lines 5-7 (emphasis added).

Therefore, Higuchi does not teach or suggest performing contrast compensation to maintain a brightness at a center of a specific color region on the image display device.

Further, the outstanding Office Action is clearly still not even properly considering the claimed features. In the claims, when an image adjustment is made to an image quality adjustment excluding contrast or brightness, a contrast compensation is performed to maintain a brightness. Johnson simply does not teach or suggest any such feature with respect to the sharpness control 208. That is, Johnson does not teach or suggest that controlling the sharpness control 208 results in a change in a contrast compensation to maintain a brightness.

Stated another way, the claims clearly recite directly setting an image quality excluding contrast and brightness adjustments. The outstanding rejection appears to indicate that Johnson meets such limitations because Johnson discloses a sharpness control 208.

However, the claims require more than merely directly setting controls besides brightness and contrast. The claims recite that those other controls that adjust image quality (excluding contrast and brightness) perform a contrast compensation to maintain a brightness. For Johnson to meet the claim limitations, Johnson would have to disclose that the sharpness control 208, when set by a user, would result in performing a contrast compensation to maintain a brightness. Johnson clearly fails to teach or suggest such subject matter and Johnson does not in fact teach or suggest operating in such a manner.

In such ways, the teachings in Johnson do not meet the features relied upon in the outstanding Office Action and do not meet the claim limitations. As a result, no combination of teachings of Johnson in view of Higuchi fully meets the claim limitations.

Moreover, the outstanding rejection has still not even addressed that there is no incentive or motivation to one of ordinary skill in the art to combine the teachings in Higuchi

and Johnson in a manner to meet the claim limitations. The motivation set forth in the Office Action to combine such teachings is:

It would have been obvious to one of ordinary skill in the art to combine the systems of Higuchi et al with that of Johnson as they both disclose displays with setting controls. The system of Johnson is advantageous as it enhances the video image by allowing the user to set controls separately.⁵

In addressing the above-noted motivation it is first noted that it is irrelevant that both Higuchi and Johnson disclose displays with setting controls. There are clearly many devices with displays with setting controls that are irrelevant to one another.

Further, applicant agrees that Johnson discloses allowing a user to set controls separately. However, that teaching is irrelevant and actually in direct contrast to one of the benefits of the device in Higuchi. That is, Higuchi discloses as a benefit allowing a user to input an age and to have automatic image processing compensations performed “to provide a processed image which is easy for the elder and low vision to read and recognize”.⁶ In such a device in Higuchi one of ordinary skill in the art would not want to include different settings such as a brightness control, a contrast control, a tint control, and a sharpness control in Johnson. Such a modification would destroy one of the objectives of the device of Higuchi, namely to make a device simple to operate by allowing a user to merely input their age. What the Office Action is actually suggesting is to take one objective of the device of Higuchi, namely to simplify an image adjustment process for an elder user by using a simple age dial, and to introduce the complexity of different image adjustment dials in Johnson, to thereby destroy that objective in the device of Higuchi. Applicant respectfully submits that it clearly would not have been suggested to one of ordinary skill in the art to destroy one benefit of the device in Higuchi in view of the teachings of Johnson, and the outstanding Office Action has not even addressed why such a modification would be advantageous.

⁵ Office Action of February 24, 2004, page 3, lines 11-14.

⁶ Higuchi at column 1, lines 31-33.

Further, applicant recognizes that the test for obviousness is not the bodily incorporation of the two different structures in the references, and applicant agrees that “[t]he test is what the combined teachings of the references would have suggested to those of ordinary skill in the art”. Applicant submits that it is the Office Action that is not even addressing or considering the teachings of the reference to those of ordinary skill in the art. The Office Action is clearly combining unrelated teachings, and in fact teachings that destroy objectives in the different devices therein, merely in an effort to hindsight reconstruct the claimed invention.

Again, it is respectfully requested that it be clearly stated on the record how it is advantageous to modify Higuchi to utilize separate video image controls as in Johnson as one objective of the device of Higuchi is to avoid using such separate controls and to use a simple age dial. That question must be answered for any consideration of a combination of teachings of Higuchi in view of Johnson.

Moreover, applicant notes that neither Higuchi nor Johnson even address the problem recognized and solved by the present invention.

As noted above, the applicant of the present invention recognized that, as an example, when sharpness is adjusted other image qualities, such as contrast and brightness of an image, are also effected. To address that recognition, the claimed invention performs contrast compensation to maintain a brightness at a center of a specific region when an image quality adjustment excluding contrast and brightness adjustments is made. Such drawbacks recognized in the prior art are not even addressed in any of the applied art.

Higuchi is not directed to a device that even recognizes the problems that the present invention recognizes and addresses. In that respect it is noted that it is only the applicant who recognized the problem discussed above in that certain image quality adjustments adversely

affect contrast and brightness. As noted in MPEP § 2141.02 discovering a source/cause of a problem must be considered, which has not been done in the outstanding Office Action.

Higuchi is directed to a completely different problem than that of the claimed invention. Higuchi is directed to a device for a navigation system installed in a vehicle that can adjust the display of a map depending on an age of an observer. To meet that objective, Higuchi discloses that different color compensation values can be utilized based on a set age.

In such ways, Higuchi clearly does not even recognize, much less address, the same problem as noted above that the present invention recognizes and solves.

Further, Johnson is directed to a device that can enhance sharpness of a video image. Such a teaching in Johnson is unrelated to performing image compensations based on age-related characteristics as in Higuchi. Johnson also teaches enhancing the luminance signal portion of a television signal, which also is unrelated to the image compensation device based on age-related characteristics as in Higuchi as Higuchi does not even indicate any type of luminance signal portion of the television signal being enhanced based on the age-related characteristics.

In such ways, the teachings in Johnson are not even properly combinable with the teachings in Higuchi.

In view of these foregoing comments, each of the pending claims 1-21 are believed to clearly distinguish over the applied art.

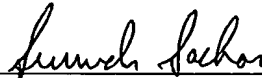
As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

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